Greater Bengaluru Development Authority

"Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru- Integrated Township (GB-IT), Bidadi"

Indent No. GBDA /Township Tender/2024-25

REQUEST FOR PROPOSALS (RFP NO. 1)

The Commissioner
Greater Bengaluru Development Authority
No, 1, Ali Asker Rd, Vasanth Nagar,
Bengaluru, Karnataka 560052

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1. SECTION -1 LETTER OF INVITATION

1. Greater Bengaluru Development Authority invites proposal to provide "Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru- Integrated Township (GB-IT), Bidadi". Refer GBDA /Township Tender/2024-25. More details on the Services are provided in the attached Terms of Reference.

2. Deleted

3. The consultant will be selected under Quality & Cost Based Selection (QCBS) - 80:20 procedures described in this RFP.

4. The RFP includes the following documents:

Section-1	Letter of Invitation
Section-2	Information to Consultants
Section-3	Technical Proposal - Standard Forms
Section-4	Financial Proposal - Standard Forms
Section-5	Terms of Reference
Section-6	Standard Form of Contract.

5. Deleted

Yours sincerely,

Commissioner,
Greater Bengaluru Development Authority,
Bengaluru.

GREATER BANGALORE DEVELOPMENT AUTHORITY

OFFICE OF THE COMMISSIONER

Greater Bangalore Development Authority
No. 1, Ali Asker Rd, Vasanth Nagar, Bengaluru, Karnataka 560052

NO. GBDA /Township Tender/2024-25. **Date:**

INVITATION FOR TENDER (IFT)

(Two Cover System)

(Through GOK e – Procurement Portal Only)

1. The Commissioner, GBDA "**Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru-Integrated Township (GB-IT), Bidadi"** invites Proposals (Technical and Financial) from eligible tenderers for appointing tenders for the works detailed in Table. The Tenderers may submit Tenders for any or all of the works given in the Table, Two tender document system as per Rule 28 of the KTPP Act shall be followed. The Tenderers are required simultaneously submit two separate electronic documents, first containing the Earnest money deposit and the details of their capability to undertake the tender (as detailed in ITT Clause 2 and 3) which will be opened first and the second containing the price tender (as detailed in Section 4 and 9) will be opened only if the Tenderer is found to be qualified to execute the tendered works. The Tenderers are advised to note the minimum qualification criteria specified in Clause 3 of the instructions to Tenderers to qualify for award of the contract.

2. The detailed Objectives and the Scope of the Assignment shall be as per Request for Proposal (RFP) Document and it may be downloaded from the Government of Karnataka e – Procurement Website https://kppp.karnataka.gov.in. The RFP Document can be downloaded from the Portal as per the prescribed Date and Time published in the Portal. Interested Consultants who wish to participate shall remit online Transaction Fee for the RFP Document after registering in the Portal. The Transaction Fee is non refundable.

3. Tender must be accompanied by Earnest Money Deposit (EMD) and a non-refundable Tender Processing fee specified for the work in the Table. Earnest money deposit and Tender processing fee will have to be in any one of the forms as specified in the tender document.

4. Tender must be uploaded on the Government of Karnataka, Karnataka Public Procurement portal (https://eproc.karnataka.gov.in) on or before the last date and time specified on the Karnataka Public Procurement Portal, so as to be received by the Employer and First Electronic Document will be opened on the date and time specified in the Karnataka Public Procurement Portal, without requiring the presence of Tenderers or in the presence of Tenderers or in the presence of the Tenderers' representatives, who wish to attend at Office Of The Commissioner Greater Bangalore Development Authority No, 1, Ali Asker Rd, Vasanth Nagar, Bengaluru, Karnataka 560052.If the office happens to be closed on the date of opening of the tenders as specified, the tenders will be opened on the next working day at the same time and venue.

5. A Pre-Tender meeting will be held on the time, date and address, as specified on the Karnataka Public Procurement Portal at Office of the Commissioner, Greater Bangalore Development Authority, No 1, Ali Asker Rd, Vasanth Nagar, Bengaluru, Karnataka 560052.

6. The Rates quoted shall be exclusive of Goods and Service Tax (GST) (Except for electrical works), and is separately reimbursed by the Employer at the prevailing rates to the Bill amount as per the Government orders, and as amended from time to time. Reimbursement of GST is not applicable to electrical works for which bidder has to quote the rates inclusive of GST.

7. Other details can be seen in the tender documents.

TABLE

Sl. No.	Name of the work	EMD (Rs in Crores)	Tender processing fee (Cost of the Tender) (Rs)	Period of completion
(1)	(2)	(3)	(4)	(5)
1.	**Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru-Integrated Township (GB-IT), Bidadi**	Rs 250000 (As per e-procurement portal)	Refer to the Karnataka Public Procurement portal	6 Months Including monsoon period

SECTION 2. INFORMATION TO CONSULTANTS

1. INTRODUCTION

1.1 The Client named in the "Data Sheet" will select a firm among those listed in the Letter of Invitation, in accordance with the method of selection indicated in the Data Sheet.

1.2 The consultants are invited to submit a Technical Proposal and a Financial Proposal, as specified in the Data Sheet (the Proposal) for consulting services required for the Assignment named in the Data Sheet. The Proposal will be the basis for contract negotiations and ultimately for a signed contract with the selected Consultant.

1.3 The Assignment shall be implemented in accordance with the phasing indicated in the Data Sheet. When the Assignment includes several phases, the performance of the consultant under each phase must be to the client's satisfaction before work begins on the next phase.

1.4 The Consultants must familiarize themselves with local conditions and take them into account in preparing their Proposals. To obtain first-hand information on the Assignment and on the local conditions, consultants are encouraged to pay a visit to the Client before submitting a Proposal, and to attend a pre-proposal conference if one is specified in the Data Sheet. Attending the pre-proposal conference is optional. The Consultant's representative should contact the officials named in the Data Sheet to arrange for their visit or to obtain additional information on the pre-proposal conference. Consultants should ensure that these officials are advised of the visit in adequate time to allow them to make appropriate arrangements.

1.5 The Client will provide the inputs specified in the Data Sheet, assist the firm in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.

1.6 Please note that (i) the costs of preparing the proposal and of negotiating the contract, including a visit to the Client, are not reimbursable as a direct cost of the Assignment; and (ii) the Client is not bound to accept any of the Proposals submitted.

1.7 Government of Karnataka (GOK) expects consultants to provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflicts with other assignments or their own corporate interests. Consultants shall not be hired for any assignment that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of not being able to carry out the assignment in the best interest of the Client.

1.7.1 Without limitation on the generality of this rule, consultants shall not be hired under the circumstances set forth below:

(a) A firm which has been engaged by the Client to provide goods or works for a project, and any of their affiliates, shall be disqualified from providing consulting services for the same project. Conversely, firms hired to provide consulting services for the preparation or implementation of a project, and any of their affiliates, shall be disqualified from subsequently providing goods or works or services related to the initial assignment (other than a continuation of the firm's earlier consulting services) for the same project.

[1] This Information to Consultants section shall not be modified. Any necessary changes, to address specific project issues, shall be introduced only through the Data Sheet (e.g., by adding new clauses). Likewise, modifications to the standard Form of Contract should be made only by including clauses outlining the Special Conditions and not by introducing changes in the wording of the General Conditions.

(b) Consultants or any of their affiliates shall not be hired for any assignment which, by its nature, may be in conflict with another assignment of the consultants.

1.7.2 As pointed out in para. 1.7.1 (a) above, consultants may be hired for downstream work, when continuity is essential, in which case this possibility shall be indicated in the Data Sheet and the factors used for the selection of the consultant should take the likelihood of continuation into account. It will be the exclusive decision of the Client whether or not to have the downstream assignment carried out, and if it is carried out, which consultant will be hired for the purpose.

1.8 It is GOK's policy to require that consultants observe the highest standard of ethics during the execution of such contracts. In pursuance of this policy, the GOK:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the selection process or in contract execution; and

(ii) "fraudulent practice" means a misrepresentation of facts in order to influence a selection process or the execution of a contract to the detriment of GOK, and includes collusive practices among consultants (prior to or after submission of proposals) designed to establish prices at artificial, noncompetitive levels and to deprive GOK of the benefits of free and open competition.

(b) will reject a proposal for award if it determines that the firm recommended for award has engaged in corrupt or fraudulent activities in competing for the contract in question;

(d) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded GOK-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a GOK-financed contract; and

(e) will have the right to require that, GOK to inspect consultant's accounts and records relating to the performance of the contract and to have them audited by auditors appointed by GOK.

1.9 Consultants shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by GOK in accordance with the above sub para 1.8 (d).

1.10 Consultants shall be aware of the provisions on fraud and corruption stated in the standard contract under the clauses indicated in the Data Sheet.

Earnest Money

1.11 The bidder are requested to submit EMD of Rs .2,50,000/- (Rupees Two Lakhs Only) in e procurement along with the Technical Bid, Hard copy of Technical Bid and EMD

2. CLARIFICATION AND AMENDMENT OF RFP DOCUMENTS

2.1 Consultants may request a clarification of any item of the RFP document up to the number of days indicated in the Data Sheet before the Proposal submission date. Any request for clarification must be sent in writing by paper mail, cable, telex, facsimile, or electronic mail to the Client's address indicated in the Data Sheet. The Client will respond by cable, telex, facsimile, or electronic mail to such requests and will send copies of the response (including an explanation of the query but without identifying the source of inquiry) to all invited consultants who intend to submit proposals.

2.2 At any time before the submission of Proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited firm, modify the RFP documents by amendment. Any amendment shall be issued in writing through addenda. Addenda shall be sent by mail, cable, telex, facsimile, or electronic mail to all invited consultants and will be binding on them. The Client may at its discretion extend the deadline for the submission of Proposals.

3. PREPARATION OF PROPOSAL

3.1 Consultants are requested to submit a Proposal (para 1.2) written in the language(s) specified in the Data Sheet.

Technical Proposal

3.2 In preparing the Technical Proposal, consultants are expected to examine the documents comprising this RFP in detail. Material deficiencies in providing the information requested may result in rejection of a Proposal.

3.3 While preparing the Technical Proposal, consultants must give particular attention to the following:

(i) JV Not allowed

The firms having following minimum experience only will be considered for qualification.

Sl. No	Minimum Qualification Criteria	No. of Projects
a	Experience in carrying out Drone Survey and preparation of base map for area of 15 sq km area for any Residential layout, Industrial areas, Smart city projects, SEZ's or Urban Infrastructure Projects Flood Management project, Irrigation Projects in any single work order in last 10 years for State / Central Government Authorities	4
b	Expertise in Photogrammetry processing and Generation of Digital Elevation Model (DEM) for area of 15 sq km area for any Residential layout, Industrial areas, Smart city projects, SEZ's or Urban Infrastructure Projects Flood Management project, Irrigation Projects in any single work order in last 10 years for State / Central Government agency	4
c	Experiences in carryout Geotechnical investigation for area of 5 sq.km for Residential layout, Industrial areas, Smart city projects, SEZ's or Urban Infrastructure Projects Flood Management project, Irrigation Projects in any single work order in last 10 years for State / Central Government agency	4
d	Consultant should have in house Photogrammetric processing unit with adequate industry standard software and hardware for handling large volume of data and imageries, high end computers, servers and minimum 10 numbers of professionals on roll last 3 years.	
e	Consultant should have their own or associate with NABL accredited Geotechnical Lab	
f	Average annual turnover for the last 3 financial years preceding the Proposal's Due Date.	Rs.4.0 Crore

(ii) For assignments on a staff-time basis, the estimated number of key professional staff-months is given in the Data Sheet. The proposal shall, however, be based on the number of key professional staff-months estimated by the firm.

(iii) It is desirable that the majority of the key professional staff proposed be permanent employees of the firm or have an extended and stable working relation with it.

(iv) Proposed key professional staff must at a minimum have the experience indicated in the Data Sheet.

(v) Alternative key professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.

(vi) Reports to be issued by the consultants as part of this assignment must be in the language(s) specified in the Data Sheet. It is desirable that the firm's personnel have a working knowledge of the Client's official language.

3.4 The Technical Proposal should provide the following information using the attached Standard Forms (Section 3):

(i) A brief description of the consultant's organization and an outline of recent experience on assignments (Section 3B) of a similar nature. For each assignment, the outline should indicate, inter alia, the profiles and names of the staff provided, duration of the assignment, contract amount, and firm's involvement.

(ii) Any comments or suggestions on the Terms of Reference and on the data, a list of services, and facilities to be provided by the Client (Section 3C).

(iii) A description of the methodology and work plan for performing the assignment (Section 3D).

(iv) The list of the proposed staff team by specialty, the tasks that would be assigned to each staff team member, and their timing (Section 3E).

(v) CVs recently signed by the proposed key professional staff and the authorized representative submitting the proposal (Section 3F). Key information should include number of years working for the firm/entity, and degree of responsibility held in various assignments during the last ten (10) years.

(vi) Estimates of the total staff effort (professional and support staff; staff time) to be provided to carry out the Assignment, supported by bar chart diagrams showing the time proposed for each key professional staff team member. (Sections 3E and 3G).

(vii) A detailed description of the proposed methodology, staffing, and monitoring of training, if the Data Sheet specifies training as a major component of the assignment.

(viii) Any additional information requested in the Data Sheet.

3.5 The Technical Proposal shall not include any financial information.

Financial Proposal

3.6 In preparing the Financial Proposal, consultants are expected to take into account the requirements and conditions of the RFP documents. The Financial Proposal should follow Standard Forms (Section 4). It lists all costs associated with the Assignment, including (a) remuneration for staff , and (b) reimbursables such as subsistence (per diem, housing), transportation (national and local, for mobilization and

demobilization), services and equipment (vehicles, office equipment, furniture, and supplies), office rent, insurance, printing of documents, surveys; and training, if it is a major component of the assignment. If appropriate, these costs should be broken down by activity.

3.7 Consultants shall express the price of their services in Indian Rupees.

3.8 The Data Sheet indicates how long the proposals must remain valid after the submission date. During this period, the consultant is expected to keep available the key professional staff proposed for the assignment. The Client will make its best effort to complete negotiations within this period. If the Client wishes to extend the validity period of the proposals, the consultants who do not agree have the right not to extend the validity of their proposals.

4. SUBMISSION, RECEIPT, AND OPENING OF PROPOSALS

4.1 The original Proposal (Technical Proposal and Financial Proposal; see para 1.2) shall be prepared in indelible ink. It shall contain no inter-lineation or overwriting, except as necessary to correct errors made by the firm itself. Any such corrections must be initialed by the person or persons who sign(s) the Proposals.

4.2 An authorized representative of the Consultant initials all pages of the Proposal. The representative's authorization is confirmed by a written power of attorney accompanying the Proposal.

4.3 For each Proposal, you should prepare the number of copies indicated in the Data Sheet. Each Technical Proposal and Financial Proposal should be marked "**Original**" or "**Copy**" as appropriate. If there are any discrepancies between the original and the copies of the Proposal, the original governs.

4.4 The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked "Technical Proposal," and the original and all copies of the Financial Proposal in a sealed envelope clearly marked "**Financial Proposal**" and warning: "**Do Not Open with the Technical Proposal.**" Both envelopes shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address and other information indicated in the Data Sheet and clearly marked, "**DO NOT OPEN, EXCEPT IN PRESENCE OF THE EVALUATION COMMITTEE**."

4.5 The completed Technical and Financial Proposal must be delivered at the submission address on or before the time and date stated in the Data Sheet. Any Proposal received after the closing time for submission of proposals shall be returned unopened.

4.6 After the deadline for submission of proposals the Technical Proposal shall be opened immediately by the evaluation committee. The Financial Proposal shall remain sealed and deposited with the Client until all submitted proposals are opened publicly.

5. PROPOSAL EVALUATION

5.1 From the time the proposals are opened to the time the contract is awarded, if any consultant wishes to contact the Client on any matter related to its proposal, it should do so in writing at the address indicated in the Data Sheet. Any effort by the firm to influence the Client in the Client's proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the consultant's proposal.

5.2 Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation, including its approval by competent authority is obtained

Evaluation of Technical Proposals

5.3 The evaluation committee appointed by the Client as a whole, and each of its members individually, evaluates the proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria, sub-criteria (typically not more than three per criteria) and point system specified in the

Data Sheet. Each responsive proposal will be given a technical score (St). A proposal shall be rejected at this stage if it does not respond to important aspects of the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Data Sheet.

Sl. No	Evaluation Criteria of Technical Proposals	Points
1	Experience in carrying out Drone Survey and preparation of base map for area for any Residential layout, Industrial areas, Smart city projects, SEZ's or Urban Infrastructure Projects Flood Management project, Irrigation Projects in any single work order in last 10 years for State / Central Government Authorities i) Project with Area > 30.00 Sq.km , each project10 marks. ------5 Projects x 10 = 50 Marks ii) Project with Area 20 to 30 Sq.km each Project 8 marks.---------- 5 Projects x 8 = 40 Marks iii) Project with area 15 to 20 sSq.km , each project 6 Marks ----------5 Projects x 6 = 30 Marks iv) Project with < l5 Sq.km = Zero Marks	**50**
2	Proposed Approach and Methodology Approach & Methodology – 20 Marks Work Schedule – 10 Marks	**30**
3	Qualification of Proposed Staff 1) Team Leader – 10 Marks 2) Photogrammetry Expert – 5 Marks 3) Survey Expert – 5 Marks	**20**

Public Opening and Evaluation of Financial Proposals; Ranking

5.4 After the evaluation of quality is completed, the Client shall notify those consultants whose proposals did not meet the minimum qualifying mark or were considered non-responsive to the RFP and Terms of Reference, indicating that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify the consultants that have secured the minimum qualifying mark, indicating the date and time set for opening the Financial Proposals. The opening date shall not be sooner than one week after the notification date. The notification may be sent by registered letter, cable, telex, facsimile, or electronic mail.

5.5 The Financial Proposals shall be opened publicly in the presence of the consultants' representatives who choose to attend. The name of the consultant, the quality scores, and the proposed prices shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the public opening.

5.6 The evaluation committee will determine whether the Financial Proposals are complete, (i.e., whether they have costed all items of the corresponding Technical Proposals, if not, the Client will cost them and add their cost to the initial price), correct any computational errors.

5.7 The lowest Financial Proposal (Fm) will be given a financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as indicated in the Data Sheet. Proposals will be ranked according to their combined technical (*St*) and financial (*Sf*) scores using the weights (*T* = the weight given to the Technical Proposal; *P* = the weight given to the Financial Proposal; *T* + *P* = 1) indicated in the Data Sheet: $S = St \times T\% + Sf \times P\%$. The Consultant achieving the highest combined technical/ financial score will be invited for negotiations.

6. NEGOTIATIONS

6.1 Negotiations will be held at the address indicated in the Data Sheet. The aim is to reach agreement on all points and sign a contract.

6.2 Negotiations will include a discussion of the Technical Proposal, the proposed methodology (work plan), staffing and any suggestions made by the firm to improve the Terms of Reference. The Client and Consultant will then work out final Terms of Reference, staffing, and bar charts indicating activities, staff, periods in the field and in the home office, staff-months, logistics, and reporting. The agreed work plan and final Terms of Reference will then be incorporated in the "Description of Services" and form part of the contract. Special attention will be paid to getting the most the Consultant can offer within the available budget and to clearly defining the inputs required from the Client to ensure satisfactory implementation of the Assignment.

6.3 Unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff (no breakdown of fees) nor other proposed unit rates.

6.4 Having selected the Consultant on the basis of, among other things, an evaluation of proposed key professional staff, the Client expects to negotiate a contract on the basis of the experts named in the Proposal. Before contract negotiations, the Client will require assurances that the experts will be actually available. The Client will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or that such changes are critical to meet the objectives of the assignment. If this is not the case and if it is established that key staff was offered in the proposal without confirming their availability, the Consultant may be disqualified.

6.5 The negotiations will conclude with a review of the draft form of the contract. To complete negotiations the Client and the Consultant will initial the agreed contract. If negotiations fail, the Client will invite the firm whose proposal received the second highest score to negotiate a contract.

7. AWARD OF CONTRACT

7.1 The contract will be awarded following negotiations. After negotiations are completed, the Client will promptly notify other consultants on the shortlist that they were unsuccessful and return the Financial Proposals of those consultants who did not pass the technical evaluation (para 5.3)

7.2 The Consultant is expected to commence the Assignment on the date and at the location specified in the Data Sheet.

8. CONFIDENTIALITY

8.1 Information relating to evaluation of proposals and recommendations concerning awards shall not be disclosed to the consultants who submitted the proposals or to other persons not officially concerned with the process, until the winning Consultant has been notified that it has been awarded the con

DATA SHEET

Clause Reference	Information to Consultants
1.1	The name of the Client is: The Commissioner Greater Bangalore Development Authority No, 1, Ali Asker Rd, Vasanth Nagar, Bengaluru, Karnataka 560052 The method of selection is: **Quality cum Cost Based Selection (QCBS - 80:20, i.e., 80% for Technical and 20% for Financial)** **The lowest financial proposal (F_{Min}) will be given a financial score (S_F) of 100 points**. The financial scores of other proposals will be computed as follows: **$S_F = 100*(F_{Min}/F)$** Where, S_F = Financial Score of given financial proposal, F_{Min}= Amount of lowest bid, F= Amount of given financial proposal **Combined evaluation of Technical and Financial Proposals:** Proposals will finally be ranked according to their combined Technical (S_T) and Financial (S_F) scores using the weights indicated in the Data Sheet: **$S= (S_T*T) + (S_F*f)$** Where, S = Combined Score S_T =Technical Score out of 100 S_F= Financial Score out of 100 T and f are values of weightage for Ttechnical and Ffinancial proposals respectively.
1.2	A technical and a Financial Proposals are requested: Yes The name, objectives and description of the Assignment are: "**Consultancy for Preparation of Base Map, Master Development Plan and Preparation of Detailed Report for Major Roads and Cross Drainage for Greater Bengaluru- Integrated Township (GB-IT), Bidadi**
1.3	The Assignment is phased: No
1.4	A pre-proposal conference will be held: Yes, _____ at GBDA, **BMRDA Head Office, Bengaluru** The name(s), address(is), and telephone/numbers of the Client's Official(s) are: Commissioner , No, 1, Ali Asker Rd, Vasanth Nagar, Bengaluru, Karnataka 560052 on all working days during working hours. 080 22263479
1.5	The Client will provide the following inputs: The Area details where mapping activities are to be carried out will be provided. Necessary supporting letters for obtaining permissions from different authorities as required to carry out survey works will be provided.
1.7.2	The Client envisages the need for continuity for downstream work: Yes
1.11	The clauses on fraud and corruption in the contract are Sub-Clause 2.7.1 of G.C.C.
2.1	Clarifications may be requested as Specified in Karnataka Public Procurement Portal before the pre-proposal meeting date. The address for requesting clarifications is: as Specified in Karnataka Public Procurement Portal

<table>
<tr><td>3.1
3.3 (vi)</td><td>Proposals should be submitted in the following language(s): English</td></tr>
<tr><td>3.3
(ii), (iii) &
(iv)</td><td>The estimated number of key professional staff months required for the assignment is: to be furnished by Consultant based on the Scope of Work.

The minimum required experience of proposed key professional staff is:
<table>
<tr><th>Sl. No</th><th>Position</th><th>Minimum No. of years of Professional Experience</th><th>Specific Expertise</th><th>Maximum Marks</th></tr>
<tr><td>1</td><td>Team Leader</td><td>15</td><td>Should have a Degree in Civil Engineering and relevant experience of at least 15 years as Team Leader / project for carrying out Drone Survey for large infrastructure development projects like, SEZ’s, Industrial areas, Residential Layout , Flood Projects, Irrigation Projects, etc.
Should have experience of being Team Leader in at least 2 earlier similar projects.</td><td>10</td></tr>
<tr><td>2</td><td>Photogrammetry Expert</td><td>10</td><td>Should have a Masters in remote sensing/GIS or equivalent with 10 years’ experience in working as a Photogrammetry expert in similar projects and should have experience in data interpretation, collation and preparation of Base maps for an assignment of similar scale.</td><td>5</td></tr>
<tr><td>3</td><td>Survey Expert</td><td>20</td><td>Should have Bachelors Degree in Civil Engineering 20 years experiences in carrying out the survey activity</td><td>5</td></tr>
</table></td></tr>
<tr><td></td><td>The minimum technical score required to pass is: 70 Marks</td></tr>
</table>

The Consultant shall have the following Equipment/ Software

Sl. No.	Technical Requirements	Remarks
1.	The Differential Global Positioning System (DGPS) (Static and RTK) having angular Least count of 1" and accuracy of 5" both for Horizontal and Vertical angles, distance measurement accuracy of 1mm with all the necessary accessories - minimum 10 Nos.	Own
2.	Digital Level - minimum 05 Nos.	Own
3.	Survey Grade UAVs, All necessary vehicles for carrying out the survey work.	Own / Hired / Leased
4.	AutoCAD civil 3D or equivalent software for urban infrastructure works, ARC GIS - minimum 05 licenses	Own
5.	Leica Photogrammetry Suite (LPS) and equivalent software - minimum 3 Licenses	Own
6.	High end Workstations (minimum 10 Nos.), Servers (minimum 01 No.), Plotters (minimum 01 No.) to print A0 sheets	Own

Note: Consultant shall enclose copy of Invoice as ownership proof. In case of hired / leased, Lease Agreement shall be enclosed. Non-submission of the stated documents will result in the Consultant being considered as non-responsive.

3.4	(vii) Training is an important feature of this Assignment: **No** [*If yes provide appropriate information]* (viii) Additional Information in the Technical Proposal includes: As per the RFP and enclosures sought and • Details of back up facilities available with them in respect of services required. • A list of concurrent commitments and also indicate availability of their staff with relevant experience, who could be mobilized by them at short notice, which will allow him to complete the assignment within a specified period. The following details should be given: o Name of assignment o Date of' entering in to the assignment o No. of man months required to complete it o Is any of the key staff whose CV is enclosed working on the assignment All these should be substantiated by relevant details. No change of key personnel is permitted without prior written permission of GBDA. Such changes may be permitted subject to satisfactory replacement. • The Composition of the proposed staff team, the task assigned to them and their timings. • Details to demonstrate capacity to mobilize resources properly so as to complete the assignment in time.
	Proposals must remain **valid 90 days** after the submission date
4.3	Consultants must submit all documents through e-procurement portal
4.4	Proposals must be submitted no later than the following date and time as per e-procurement portal
5.1	The address to send information to the Client is: **Through e-procurement portal only**
5.8	The formula for determining the financial scores is the following: [*Sf = 100 x Fm/F, in which Sf is the financial score, Fm is the lowest price, and F the price of the proposal under consideration*] The weights given to the technical and Financial Proposals are: T= 0.8, and P= 0.2
6.1	Negotiations will be held at **Office of the Commissioner Greater Bengaluru Development Authority No, 1, Ali Asker Rd, Vasanth Nagar, Bengaluru, Karnataka 560052.**

SECTION 3. TECHNICAL PROPOSAL - STANDARD FORMS

3A. Technical Proposal submission form.

3B. Consultant's references.

3C. Comments and suggestions on the Terms of Reference and on data services, and facilities to be provided by the Client.

3D. Description of the methodology and work plan for performing the assignment.

3E. Team composition and task assignments.

3F. Format of Curriculum Vitae of proposed key professional staff.

3G. Time schedule for professional personnel.

3H. Activity (work) schedule.

3A. TECHNICAL PROPOSAL SUBMISSION FORM

[*Location, Date*]

FROM: (Name of Consultant)

To: Commissioner

Greater Bengaluru Development Authority Bengaluru Metropolitan Region Development Authority (BMRDA), Bengaluru

Ladies/Gentlemen:

Subject: **Subject**: "**Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru- Integrated Township (GB-IT), Bidadi**

We, the undersigned, offer to provide the consulting services for the above in accordance with your Request for Proposal dated [*Date*], and our Proposal. We are hereby submitting our Proposal which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope.

If negotiations are held during the period of validity of the Proposal, i.e., before [*Date*] we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from contract negotiations.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature: Name
and Title of Signatory: Name
of Consultant: Address:

3B. CONSULTANT'S REFERENCES

Relevant Services Carried Out in the Last Five Years
That Best Illustrate Qualifications

Using the format below, provide information on each reference assignment for which your firm/entity, either individually as a corporate entity or as one of the major companies within an association, was legally contracted.

<table>
<tr><td colspan="2">Assignment Name:</td><td>Country:</td></tr>
<tr><td colspan="2">Location within Country:</td><td>Key professional staff Provided by Your Firm/entity(profiles):</td></tr>
<tr><td colspan="2">Name of Client:</td><td>No. of Staff:</td></tr>
<tr><td colspan="2">Address:</td><td>No. of Staff-Months; duration of assignment:</td></tr>
<tr><td>Start Date (Month/Year):</td><td>Completion Date (Month/Year):</td><td>Approx. Value of Services (Rs.M):</td></tr>
<tr><td colspan="2">Name of Associated Consultants, if any:</td><td>No. of Months of Key professional staff, provided by Associated Consultants:</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:</td></tr>
<tr><td colspan="3">Narrative Description of Project:</td></tr>
<tr><td colspan="3">Description of Actual Services Provided by Your Staff:</td></tr>
</table>

Consultant's Name: _____

3C. COMMENTS AND SUGGESTIONS OF CONSULTANTS ON THE TERMS OF REFERENCE AND ON DATA, SERVICES, AND FACILITIES TO BE PROVIDED BY THE CLIENT

On the Terms of Reference:

1.

2.

3.

4.

5.

On the data, services, and facilities to be provided by the Client

1.

2.

3.

4.

5.

CONSULTANT'S NAME:

3D. DESCRIPTION OF THE METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT

3E. TEAM COMPOSITION AND TASK ASSIGNMENTS

1. Technical/ Managerial Staff

Sl. No.	Name	Position	Task
1. 2. 3. 4.			

2. Support Staff

Sl. No.	Name	Position	Task
1. 2. 3. 4.			

3F. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED KEY PROFESSIONAL STAFF

Proposed Position: _____

Name of Consultant: _____

Name of Staff: _____

Profession: _____

Date of Birth: _____

Years with Firm/Entity: _____ Nationality: _____

Membership in Professional Societies: _____

_____

Detailed Tasks Assigned: _____

_____

Key Qualifications:

[*Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. Use about half a page.*]

_____

Education:

[*Summarize college/university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.*]

_____

Employment Record:

[*Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.*]

_____

Languages:

[*For each language indicate proficiency: excellent, good, fair, or poor; in speaking, reading, and writing*]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

_____ Date: _____
[Signature of staff member and authorized representative of the Consultant] ***Day/Month/Year***

Full name of staff member:_____
Full name of authorized representative: _____

3G. TIME SCHEDULE FOR PROFESSIONAL PERSONNEL

Sl. No.	Name	Position	Reports Due/Activities	Months (in the form of a Bar Chart)*												
				1	2	3	4	5	6	7	8	9	10	11	12	Number of Months
1.																Subtotal (1)
2.																Subtotal (2)
3.																Subtotal (3)
4.																Subtotal (4)

Full-time: _____ Part-time: _____
Reports Due: _____
Activities Duration: _____

* The Schedule should be for the period of completion of assignment

Signature:_____
(Authorized Representative)

Full Name:_____

Title:_____

Address:_____

3H. ACTIVITY (WORK) SCHEDULE

A. Field Investigation and Study Items:

		Monthwise Program (in form of Bar Chart) ++ *[1st, 2nd, etc. are months from the start of assignment]*											
Sl. No.	Item of Activity (Work)	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
	_____												
	_____												
	_____												
	_____												
	_____												

++ The Program should be period of completion of assignment.

B. Completion and Submission of Reports

Reports: *	Programme: (Date)
1. Inception Report	
2. Interim Progress Report (a) First Status Report (b) Second Status Report	
3. Draft Report	
4. Final Report	

*** Modify as required for the Assignment.**

SECTION 4. FINANCIAL PROPOSAL - STANDARD FORMS

4A. Financial Proposal submission form.

4B. Summary of costs.

4C. Breakdown of costs.

4A. FINANCIAL PROPOSAL SUBMISSION FORM

[*Location, Date*]

FROM: (Name of Consultant)

Commissioner
Greater Bangalore Development Authority
No, 1, Ali Asker Rd, Vasanth Nagar,
Bengaluru, Karnataka 560052

Ladies/Gentlemen:

Subject: "Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru- Integrated Township (GB-IT), Bidadi ". **Indent No. GBDA /Tender Township/2024-25**

We, the undersigned, offer to provide the consulting services for the above in accordance with your Request for Proposal dated [*Date*], and our Proposal (technical and Financial Proposals). Our attached financial proposal is for the sum of [*Amount in words and figures*].

Our financial proposal shall be binding upon us subject to the modifications resulting from contract negotiations, up to expiration of the validity period of the Proposal, i.e., [*Date*].

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature:
Name and Title of Signatory:
Name of the Consultant:
Address:

4B. SUMMARY OF COSTS

S. No.	*Description @*	*Unit*	*Quantity*	*Rate*	*Amount (Rupees)*
Part A					
1.	Establishing DGPS control network and carrying Topographical Survey using Total Station/ Drone, and preparation of GIS compatible base map 1:2000 scale with controls at 1.0 m interval, Geo referring of village maps and cadastral overlay. Creation of Geo Database using Arc GIS and submission of .shp file or any GIS formation (The AOI will include Bidadi GBIT covering 8935 Acres and 2742 Acres of Economic Corridors (ECs) however, for continuity and planning of overlapping areas, it is recommended to include approx. 100m buffer all-round AOI. Therefore, the total area will be approx. 12844 Acres. Submission of Survey Report	Acres	12844		
2	Finalization of Alignment fo Economic Corridor For approved alignment of Economic Corridor, consultants to carry out Drone Survey and prepare • Visualization of existing Development along the proposed ECs • 3D visualization of alignment of ECs • Cadastral information • Land Schedule for Preliminary Notification for Land Acquisition • Transport corridor, Production centers:, Demand centers: • Typical Cross Section and Junctions • Location of Proposed Flyover/ Grade separators	Km	37		
3	**Total (A)**				
Part B					
5	**Support Staff** GIS Expert Minimum 5 Years' Experience	Person Months	12		
	Total (B)				
	Grand Total (A+B)				
				TOTAL COST	
				GST @ 18%	
				GRAND TOTAL	

Note: The ceiling cost of the consultancy is as shown in the Summary of Costs. Payments will be made as per stipulations of the Special Conditions of Contract. The break-up of cost as given in formats 4C is to facilitate assessment of reasonableness of costs and conducting negotiations in accordance with clause 6 of the Information to Consultants.

@ Modify the items as appropriate for the consultancy assignment.

4C. BREAKDOWN OF COSTS (RS)

I REMUNERATION FOR STAFF

No.	Position	Name	Rate* (Rs.)	SM	Amount (Rs)
	Key professional staff				
1.					
2.					
3.					
4.					
5.					
6.					
	Sub-Total				
	Sub-Key professional staff				
1.					
2.					
3.					
4.					
5.					
6.					
	Sub-Total				
	TOTAL				

SM = Staff Month

II. Support Staff

No.	Position	Name	Staff Months	Rate* (Rs)	Amount(Rs)
1 2 3 4					
				Total :	

***** Provide the break up of the rates to show the basic salary, social costs and overhead.

III Transportation (Reimbursable) *

Total:

IV. Duty Travel to Site (Reimbursable)*

Total:

V Office Rent (Reimbursable) *

Total:

*Prepare details as appropriate for the consultancy assignment.

VI. Office Supplies, Utilities and Communication (Reimbursable)

No.	Item*	Months	Monthly Rate (Rs)	Amount in (Rs)
1.				
2.				
3.				
4.				

TOTAL : ----------

* Prepare details as appropriate for the consultancy assignment.

VII. **Office Furniture and Equipment (Reimbursable)**

No.	Description(*)	Unit	Quantity	Rate ( )	Amount ( )
	Office Furniture (Purchase)				
1					
2					
3					
4					
5					
6					
	Office Equipment (Purchase)*				
1					
2					
3					
4					
5					
6					
				Total	

* Prepare details as appropriate for the consultancy assignment

VIII. Reports and Document Printing

No.	Description*	Number	No. of Copies	Rate per Copy (Rs.)	Amount (Rs.)
1					
2					
3					
4					
5					
				Total	

IX. Topographical Surveys (if any)*

- Prepare details as appropriate for the consultancy assignment

SECTION 5. TERMS OF REFERENCE

Terms of Reference normally contain the following sections:

1. BACKGROUND
2. A CONCISE STATEMENT OF OBJECTIVES
3. AN OUTLINE OF THE TASKS TO BE CARRIED OUT
4. SCHEDULE FOR COMPLETION OF TASKS
5. DATA, SERVICES AND FACILITIES TO BE PROVIDED BY THE CLIENT
6. FINAL OUTPUTS (i.e., REPORTS, DRAWINGS, etc.) THAT WILL BE REQUIRED OF THE CONSULTANT
7. COMPOSITION OF REVIEW COMMITTEE TO MONITOR CONSULTANTS WORK
8. PROCEDURE FOR REVIEW OF PROGRESS REPORTS, INCEPTION, STATUS, FINAL DRAFT AND FINAL REPORTS
9. LIST OF KEY PROFESSIONAL POSITIONS WHOSE CV AND EXPERIENCE WOULD BE EVALUATED. (This should be same as indicated in Clause 3.3 (iv) of Data Sheet to Information to Consultants.)

SECTION - 5: TERMS OF REFERENCE

"Consultancy Service for Preparation of Base Map and Preparation of Preliminary Report for Economic Corridors for Greater Bengaluru- Integrated Township (GB-IT), Bidadi".

1. Introduction

The Bangalore Metropolitan Region Development Authority (BMRDA) is an authority established under the BMRDA Act, 1985 (Karnataka Act No. 39 of 1985), for the purposes of planning, coordinating and supervising the proper and orderly development of the area within the Bangalore Metropolitan Region and allied matters.

BMRDA in its Revised Structural Plan - 2031, identified the growth Clusters (8 Numbers) and Nodes (04 numbers) within the planning area.

BMRDA in its endeavour to develop clusters and nodes, now proposes, development of Townships aimed at "**Establishing a technologically advanced and sustainable urban Center**" and identified tentative land for development of new Townships in the 10 villages covering 8934A 35 G approx.

Sl. No.	Village Name	Apx Area for Development	
		A	G
1	Allalasandra	1438	08
2	Kanchugaranahalli Kaval	109	17
3	Kanchugaranahalli	1546	12
4	Gollarapalya	339	31
5	Kempaiahnapalya	385	11
6	Bannigere	1154	04
7	Byaramangala	1284	07
8	Mandlahalli	92	21
9	Hosuru	2532	01
10	Vaderahally (part)	62	36
	Total :	8943	35

In pursuance of the above, GBDA intends to appoint a Consultant for undertaking the '**Drone survey, Compilation of GIS compatible seamless Base map on 1:2000 scale with 1 m contour interval, Georeferencing Revenue Survey Map and Survey Number-wise Area Statement**'**.**
The Consultant will work under the overall supervision, direction and guidance of the Commissioner, GBDA, Metropolitan Planner and Director, BMRDA and coordinate with Additional Metropolitan Commissioner, BMRDA and concerned Joint Director at LPA level.

The GBDA will provide the Consultant with available reports, data and services appropriate to achieving the objectives of the study. The Consultant shall be responsible, however, for the analysis and interpretation of all data received, undertake other studies to validate the data and give conclusions and recommendations derived from these data.

The Objective of the study is

1.1 Objectives and Scope of Work

i) Drone survey, Compilation of GIS compatible seamless Base map on 1:2000 scale with 1 m contour interval, Geo referencing Revenue Survey Map and Survey Number-wise Area Statement.

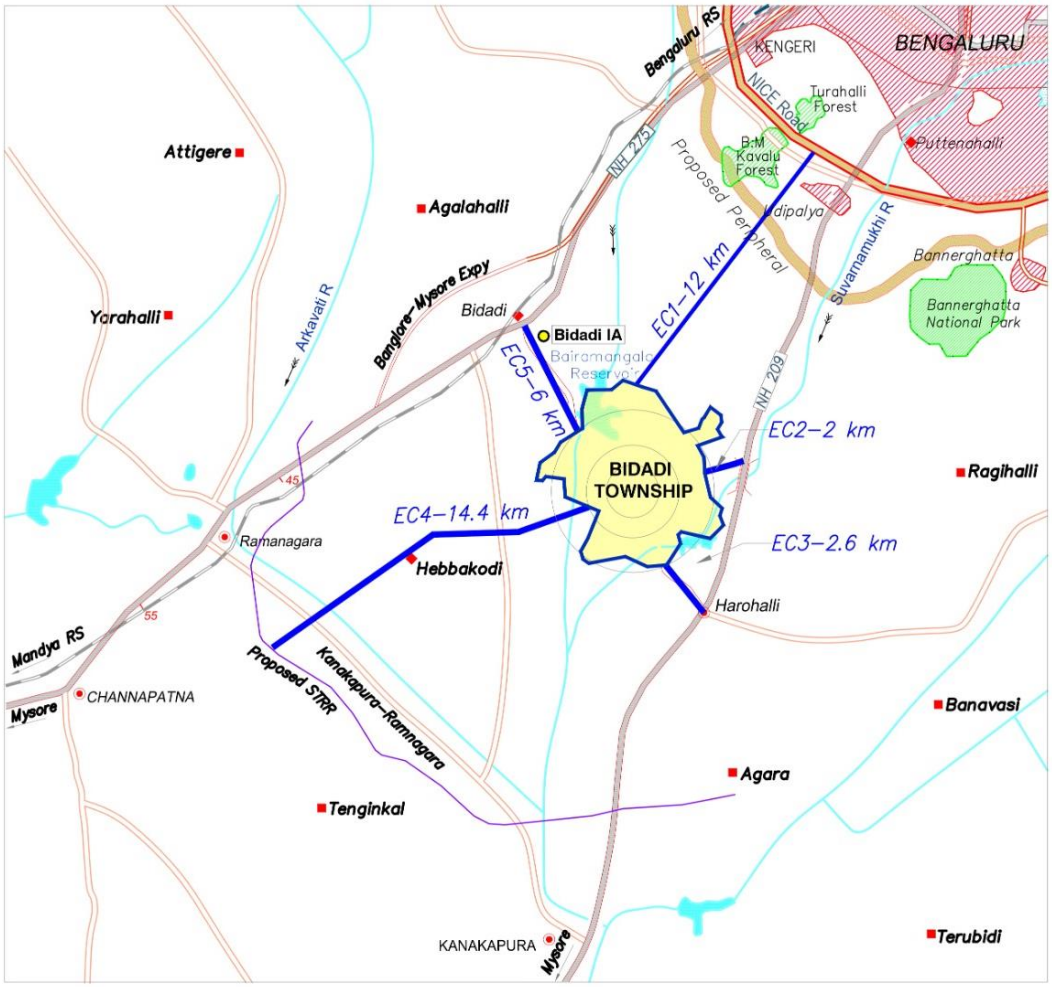
ii) Finalisation of Alignment for Economic Corridor connecting NICE Road, National Highway 209 & 275 and STRR from Project area

iii) Provide two GIS Experts along with necessary hardware (laptop), software and other requirements.

3. DETAILED SCOPE OF SERVICES

3.1 PROPOSED STUDY AND AREA OF INTEREST (AOI)

The AOI will include Bidadi GBIT covering 8935 Acres and 2742 Acres of Economic Corridors (ECs) however, for continuity and planning of overlapping areas, it is recommended to include approx. 100m buffer all-round AOI. Therefore, the total area will be approx. 12844 Acres.



3.2 : Task-1: Preparation of Base map : For GB-IT and connecting Economic Corridors

The detailed scope of services covered under this assignment is as below.

3.2.1 **Data acquisition and compilation of Base map**

Time is of essence in this stage and the consultant is required to prepare Drone Survey Map for Bidadi Township.

Secondary maps / Data collection:

(a) Collection of latest maps, Toposheets, Satellite imageries etc., of proposed AOI / tentative locations for new development from the respective authorities.

(b) Survey of India (SOI) GTS control network, National Geodetic Control Point (NGCP) Benchmarks etc.

(c) Administrative jurisdiction, district, taluka, village, municipal and panchayat limits

(d) Survey number-wise area within the AOI from revenue records.

(e) Geology, hillocks, mines, terrain and surface features etc., during site validation.

(f) Details of infrastructure projects, major Townships, utilities, access roads, main roads, canals, pipelines, industries etc., from respective departments such as PWD, NH, WRD etc. through BMRDA.

(g) Land use: built-up area, open land, vegetation cover, wildlife and land information etc., for AOI.

(h) Waterbodies, watercourses, flood plains, other low lying areas.

3.2.2 Preparation of GIS compatible Base map on 1:2000 scale with 1m contours

Development of GIS compatible Base map in a seamless environment from Drone survey raw data, photogrammetric compilation and generation of ortho vector Base maps with contours, text editing etc.

(a) Ground control network for planimetric and height control.

(b) Photogrammetry compilation and processing of Drone data, aerial triangulation and generation of vectorised maps with contours.

(c) Base map CAD compilation on 1:2000 scale with 1m contours with all topographical, cultural features, built-up area, communication network, vegetation, waterbodies etc.

(d) Georeferencing of Revenue / cadastral maps, digitisation and CAD compilation.

(e) Extraction of survey number-wise area from revenue records such as private lands, Govt lands, waterbodies etc.

(f) Superimposing of above secondary maps/data, administrative boundaries, BMRDA limits, Land use etc., in GIS layers on the Base map.

(g) Quality control and site validation

(h) Survey report with list of points and methodology.

3.2.3 Geo referencing Revenue maps

Geo referencing of Revenue / cadastral maps, digitisation and CAD compilation.

Identification of Survey No. wise area details from Revenue records, private land, Govt. / Forest land, waterbodies.

Compilation of preliminary area statement survey number wise as per revenue records

Base Map with GIS layers will be the main component for the preparation of Base map for development of proposed Townships for administrative approval.

3.2.4 Establishment of Ground Control Network

3.2.4.1 Establishment of DGPS and Level Control

DGPS control will be established by **consultant** in the AoI and connected by Levelling from Survey of India (SoI) GTS Bench Mark (BM), as below:

(a) Primary Control and structures : 01 No. (8 Hrs Observation) on permanent *rock-in-situ*

(b) Secondary Controls : 02 Nos. (4Hrs) -do-

(c) Tertiary Controls : 20 Nos. (45 Minutes) at about 1.5 - 2 km interval on permanent rock- in-situ and stone markers.

All DGPS control will be connected by levelling.

List of above Control Points established with Coordinates, Levels shall be provided to BMRDA for their record.

Additional control points shall be established as required with reference markers and paint marks.

Standard DGPS and Levelling Practices will be followed to achieve accuracy of minimum +/- 25cm Horizontal / Vertical.

All raw data with field sketches/Photos used or derived from this contract will be provided.

3.2.4.2 Control Chart

A Survey Control Chart will be prepared with the positions of existing controls, proposed GCPs, and Benchmarks to ensure a well-distributed control network.. Accordingly GCPs will be evenly distributed.

3.2.4.3 Ground Reconnaissance

Reconnaissance Survey will be carried out to

(a) Identify existing Control points, Bench Marks physically available on the ground along the alignment corridor.

(b) Select and finalize the best suitable locations / permanent objects for proposed GCPs as indicated on the Control Chart.

The finalised locations will be marked on the Control Chart and physically on the ground by paint markers. GPS coordinates along with description and other details marked on KMZ files will be provided to the DGPS crew to carryout observations at pre identified locations.

3.2.4.4 Specifications for DGPS Controls

The GCP network and specifications are mentioned below.

<table>
<tr><th rowspan="2">SI. No.</th><th rowspan="2">Criteria</th><th colspan="3">Specifications</th></tr>
<tr><th>Primary Control Points (PCPs)</th><th>Secondary Control Points (SCPs)</th><th>Tertiary Control Points (TCPs)</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Interval</td><td>at about 500 km</td><td>at about 100 km</td><td>at about 1.5 - 2 km</td></tr>
<tr><td colspan="3">GCPs will be established evenly along the AOI at about 2 km and avoid signal interference near the Transmission Line etc.</td></tr>
<tr><td>2</td><td>Location</td><td colspan="3">Ideal locations will be protected premises such as Govt. Offices, schools, community centres, panchayat offices, hospitals, road, canal and other infrastructures etc., on rock-in-situ and other permanent objects.</td></tr>
<tr><td>3</td><td>Monumentation / Markers</td><td>Rock-in-situ, building plinth, structures and other Permanent Objects,</td><td>On Permanent Objects</td><td>On Permanent Objects</td></tr>
</table>

4	Approx. no. of GCPs	1	2	14 - 16
5	Equipment	Dual Frequency DGPS System		
6	Minimum Observation Time	4 hours	1 hour	45 Minutes
7	Horizontal Accuracy	< +/-3 mm (after post processing with the base line / point)		
8	Vertical Accuracy	< +/- 6 to 10 mm (after post processing with the base line/ point)		
9	Datum and Co-ordinates	WGS -1984 Datum and UTM projection		
10	Output required	Monument Unique ID, Longitude, Latitude in WGS-1984, Horizontal coordinates (X, Y) with UTM Zone Altitude (Z) from Mean Sea Level		
11	Parameters	(a) Cut -off angle 15 deg (b) GDOP < 4 (c) Observations recording rate 15 sec		

3.2.4.5 Criteria for Selection of DGPS Station location

- DGPS stations shall be approachable and not likely to be disturbed by locals, animals, etc.
- Station will not be close to reflecting surfaces like lake, buildings etc.
- DGPS receiver shall be at least 250 m away from the nearest power line or powerful transmitters, Mobile towers etc.
- Should be located away from signal jamming areas established by defence or any other agencies.
- DGPS stations requires a free cone of 75º above and around the DGPS Antenna in which no buildings, trees and other obstructions interfere.

3.2.4.6 DGPS Observations

High-end Dual Frequency Differential Global Positioning System (DGPS) along with all necessary accessories will be deployed. DGPS co-ordinates will be referenced to WGS-84 datum and Universal Transverse Mercator Projection. Heights will be determined based on the Ellipsoidal datum and also the MSL derived by connecting to nearest SOI GTS and other Benchmarks.

Simultaneous observations are made at both the known and unknown points. This involves receiving signals from satellites using a GPS receiver for a prescribed duration of time.

3.2.4.7 Post pointing of GCPs, Digital photographs and supporting sketches

For Aerial Triangulation (AT) and accurate identification of GCPs, supporting digital photographs and sketches are required for each Control point and Benchmarks.

All Control Points will be Post pointed within 1 mm accuracy and marked on Drone image at the background with supporting sketches, distances up to 5 cm to the nearest 3 identifiable image points along with brief description of control point.

Observation details for all DGPS points will be recorded in standard format along with Post pointing compliances as above.

Geo-tagged Digital photographs of the control points will be captured to precisely indicate the control point location.

3.2.4.8 Post Processing of DGPS data

Observed DGPS data shall be down loaded daily and backed up in RINEX format. Data will be post-processed using known co-ordinates of base stations in the NGCP network by industry standard software Leica Infinity or equivalent.

3.2.4.9 Height Control

Levels with be referenced to SOI GTS Benchmarks, other permanent Benchmarks, NGCP Control etc., while connecting DGPS observations.

3.2.4.10Quality Control

In-built quality control checks at each and every stage of the project execution. Quality control checks shall be built into the production and data flow line shall be controlled in such a way as to ensure that all data is correct, before it can proceed to the next stage of the flow line.

BMRDA, if and as deemed appropriate, may verify the collected DGPS Control Points through independent sample ground survey validation.

DGPS coordinates will be processed both at site and office for check.

Post pointing of GCPs will be cross checked with support sketches and distance to the nearest reference points to ensure correct identification.

3.3 Specification for Drone Survey, Processing and Mapping using Survey Grade Drone, Bidadi Township Project.

Sl. No.	***Description***	***Specifications and Deliverables***
Data Acquisition		
1.	Coverage	AOI as shown on Index map 9600 Acres approx. KMZ file limit is only indicative. Area covered will include 100m buffer beyond the outer perimeter of AOI.
2.	Drone	Survey Grade Drone will be used with PoS (GPS and IMU)
3.	GSD	05 cm
4.	Bands	R G B (Three band natural color imagery)
5.	Radiometric resolution	Minimum 8 bit per band
6.	Overlap	75% overlap between successive images in a flight line, 60 % overlap between two adjacent flight line will be ensured so that points are captured in at least three images.
7	Flight Plans	Flight Plans will be done for the AoI considering the Boundary Limits / Shape, Topography, Forests and Built-up areas. Proposed flight planning will be prepared prior to project execution with information on projected flight lines, approximate number of exposures with image centers etc.

8.	Collection condition	(i) Sun angle will not be less than 40 degree to minimize shadow. (ii) The project site has considerable built up area / vegetation, therefore photograph shall be captured at high sun angle to avoid shadows due to buildings. (iii) Cloud free with minimal smoke, smog, fog and dust. (iv) Minimum soil moisture and sufficient gap after rainfall. (v) Every effort will be made to avoid breaks within individual flight lines. Where breaks occur, these will have an overlap of at least four frames to ensure a stereo model of overlap or tie.
8.	Image format	Uncompressed GeoTIFF
Ground Reference Stations/Ground Control Points		
9.	Survey Control	(i) Planimetric and Height controls shall be densified from the existing Control established at about 1.5 - 2 Km. (ii) Necessary number of additional Control Points will be provided as required to achieve 25 Cm or better in height and 10 Cm or better in Planimetry (X and Y) and also for quality assessment. (iii) As far as possible, control points will be established on Rock-in-situ / Permanent structures and loose stones / markers for further setting out works. (iv) All Coordinates and Levels will be in terms of WGS-84, GTS BM and Mean-sea Level. (v) Detailed Survey Report on Ground Control Points will include - List of Control Points with X, Y, Z and point description. - Levelling Data / Records, list of points with description.
Coordinate System and Accuracy - Deliverables		
10.	Horizontal Datum	The World Geodetic Datum 84 (WGS-84).
11.	Vertical Datum	All deliverables specified are as *orthometric* will be referenced to MSL.
12.	Map Projection	The coordinate system for all deliverables is Universal Transverse Mercator (UTM).
Ortho Images		
13.	Imagery product	Seamless Orthophoto mosaic covering the project area and non-overlapping, edge-matched tiles of uniform size covering AOI.
14.	Horizontal accuracy	20 cm +/- at 95% Confidence Interval Accuracy report of Orthophoto against the ground control points and check points to be submitted along with Orthophoto deliverables. Minimum 01 checkpoint to be used for every 05 sq.km to validate accuracy of Orthophoto.

15.	Aerial Triangulation (AT) Report	An aerial triangulation report will be provided upon completion of all adjustments. This Report will include: (i) An executive summary of the aero triangulation solution and its results. (ii) A detailed narrative of the adjustment process and quality checks for accuracy. (iii) A description of the software and equipment used to perform the adjustments. (iv) A listing of the final adjusted coordinates in a spreadsheet with image id, X, Y, Z, Omega, Phi and kappa of adjusted results. (v) Project /Block files used for aero triangulation process.
16.	Ortho rectification	(i) The rectification process will use the cubic convolution or any other re-sampling technique to ensure high accuracy and image quality. (ii) The mosaic process will minimize image distortions and smearing and produce a seamless edge-matched product. (iii) Processes will be used during ortho photo production to avoid the presence of warped and misaligned above ground transportation features. (iv) Ortho-rectified Image tiles will be totally balanced prior to generation of an image mosaic. Relative join (misalignment) of transportation features between adjacent image chips/tiles will be within the tolerance defined by the horizontal positional accuracy requirement set out above. (v) The rectification process will involve a solution of the appropriate photogrammetric equations for each pixel in the output image.
17.	Radiometry	The tiles of ortho mosaic will be clear and sharp in detail with no light streaks, static marks, scratches, or other noticeable blemishes. The imagery will be free from defects, such as out-of-focus imagery, and will not contain inconsistencies in tone and/or density between individual orthos and/or adjacent sheets. To ensure consistency, the imagery will be radiometrically and geometrically corrected to enable adjacent files to be displayed simultaneously without obvious distinctions between them.
18.	Digital ortho image delivery	(i) An edge-matched, non-overlapping tiles of 1 km x 1km ortho tiles with 5 cm pixel resolution in .tiff and tfw format. (ii) Tile name with combination of first two digit of X coordinate and first two digits of Y coordinates of lower left corner of the tile grid, will be provide. (iii) Orth photo tiles will be generated with rounded coordinates with multiples of 1000m.
Digital Elevation Model		
19.	Digital Elevation Model (DEM)	• DEM is a bare earth Elevation Model having elevation at regularly spaced intervals. • DEM will be generated at 5m X 5m grid interval. • The vertical accuracy of DEM will be 25 cm (95 % confidence level) • DEM will be referenced to the Survey of India Vertical Datum (MSL).

		• Delivery of DEM in 1km x 1km tiles in ESRI floating point GRID format and Interleaved by Line (BIL) format in softcopy. Tile naming will be same as the one used for ortho photo. • DEM data will be seamless across tile edges, no edge artefacts; there will not be any sink, spike, over smoothening and quilted appearance in the DEM data. • Break lines will be used to generate ground realistic DEM • Void areas (i.e., areas outside the project boundary but within any tiling scheme) shall be coded using a unique "NODATA" value. • Hydrological enforcement and conditioning will be undertaken for natural and man-made water bodies and water courses. - Flattening of water bodies >=100m^2 and digitization of water courses with double line for >=2m width. - Flat and level bank-to-bank with a gradient following the immediate terrain. - Ensure water courses do not break at road crossings and bridges. - All retention water bodies will have same elevation - The entire water surface edge will be at or immediately below the surrounding terrain.
20.	Breaklines	• Deliverables includes Mass point/spot elevations and 3D Break lines of distinctive terrain features in ESRI shape file format.
21.	Contours	• 1 m contour shall be generated using DEM • Contour data will be delivered in .dwg and .shp file format following 1km x 1km tiles used for ortho photo generation. • Every fifth contour will be classified as major contour and all other as minor contour with appropriate contour label. • The contour data should have proper 3D snap and edge matching across tile edges. • There will not be any break in contour line within tile data.
Base Map on 1:2000 Scale with 1 m contour interval		
22.	Topographic map at 1:2000 Scale	• Topographic map will be generated with standard attribute / features • Preparation / finalization of Legends & Symbols as per SOI Standards / Scope of Work. • Grid Generation, Preparation of Sheets Layout, Finalization Title block. • Vectorization and editing of topographical features from Ortho rectified Image and annotation from the SoI Topo Maps. • Vector map of topographic features will be delivered in **.**dwg format following 1km x 1km tiles used for Ortho-photo generation.

		• The data will be cleaned for all topological errors. • Vector data will be edge matched with consistency in layer naming across tile edges. • Vector Map will be delivered after necessary cartographic editing including annotation, layering and symbol representation following standards. • Topographical Base map will be prepared on 1:2000 scale with 1 m contours, spot levels with all Topographical surface features, ridges, valley lines, nallah, Cultural details such as Roads, Tracks, Buildings, utilities, Irrigation assets, Drains, vegetation, isolated Trees etc. • The accuracy of topographic map will be 20 cm +/- Horizontal. • The data will be checked for any missing features, interpretation, edge matching and for positional accuracy. • The line neatness/smoothness will be maintained. • Building features will be digitized maintaining orthogonal wherever ~~it is~~ necessary. • Digitization of survey number limit with survey numbers will be carried out from Georeferenced Cadastral maps. Survey No. wise Area Statement will be provided. • Manual QC and Site validation will be carried out • Corrections as per manual QC and site validation will be updated • Preparation of Final Drawings Standard CAD practices will be followed. All Draft drawings and deliverable shall be as per approved Pilot. Final deliverables will be submitted after attending observations / corrections if any.
Accuracy Assessment		
24.	Accuracy Assessment	(i) Separate set of Ground Control Points (which are not used for the processing of data and in generation of deliverables) will be used for Quality Assessment. (ii) Method of assessment of Horizontal accuracy and vertical Accuracy. (iii) Compliance to Horizontal and Vertical Accuracy using required number GCP as per International Standards will be indicated in the Report.
Detailed Survey Report		
25.	Final Report	01 set of hard and soft copy of final report (editable version & pdf version) detailing all above aspect comprehensively including methodology wherever applicable will be submitted.
26	**Other Information**	• Detailed Topographical survey of AOI and generate contours of 1 m intervals and preparation of Map with Cadastral information using the village maps collected from Revenue Authorities. • The locations of Bench mark, Triangulation Stations and DGPS control points to be finalized during recci survey and accordingly the TBM's and control points to be established at site.

		• The Photogrammetrically compiled maps will be updated/validated at site to incorporate all missing data such as o Classification of roads, tracks, canals with features like culverts, bridges, Kilometer stones and related structures that could not be identified on the plot plan. o Utility features like electrical (voltage), telephone lines, poles, junctions etc. o Water courses, pereniality of stream, structure crossings, bank heights, bed conditions etc. o Wells with depth, places of worship, burial, important buildings, police station, post office, colleges and other features. Consultant will georeference Revenue maps for identifying affected survey numbers, area etc., from revenue records and compile preliminary Survey No. wise Area Statement. However, sub-divisions and other details is not included in the present Scope of Work. o Surface terrain features like rocks, boulders, hill tops, saddle, slope, vegetations, prominent trees, bushes etc. o Descriptive remarks, place names, destinations and other features

3.4 Task -2 Alignment finalisation and Preparation of 3 D Model for Economic Corridor Apx 37.00 Km

Consultant to carry out the desktop study using SOI Topo sheet, and High Resolution Satellite Images (Carto sat images) and Identify the preliminary alignment for Economic Corridors connecting GBIT to NICE Road, NH 209 & 275 and STRR. The preliminary alignment of ECs will be discussed and approved by GBDA.
For approved alignment of Economic Corridor, consultants to carry out Drone Survey and prepare

- Visualization of existing Development along the proposed ECs
- 3D visualization of alignment of ECs
- Cadastral information
- Land Schedule for Preliminary Notification for Land Acquisition
- Transport corridor, Production centers:, Demand centers:
- Typical Cross Section and Junctions
- Location of Proposed Flyover/ Grade separators

3.5 Task-3 : Providing Two GIS Experts to GBDA for 6 months duration : 2 Nos x 6 months = 12 Man months

Consultant two GIS experts to GBDA to work from GBDA, Bengaluru office

GIS Experts should be BE or Diploma engineers with 5 years experiences
All with necessary hardware Suitable Laptop and software

4 ASSISTANCE BY GBDA

(a) GBDA provide secondary data and reports available relevant to the project. BMRDA shall also provide liaison and support services for data collection with other Government agencies.

(b) Timely acknowledgement and certification of deliverables as per TOR along with payment.

(c) Provide security / protection for unrestricted free access to site

(d) Office Space for GIS Engineers at GBDA office, Bengaluru with suitable furniture, printer, Wi-Fi connection free of cost

5. **Deliverables and Payment terms**

Sl. No.	Deliverables	Time Frame	Amount Payable
1	Inception Report **covering approach & Methodology, Bar Chart, Quality Control** and DGPS control network	**T + 15 Days**	**5% of Part A**
2	Data Collection and establishment of DGPS Control Network using high end DGPS equipment	T + 30 Days	10% **of Part A**
3	Preliminary Alignment for Economic Corridor based on Desktop Study on SOI Topo Sheet, HRSI CartoSAT images	T + 45 days	10% **of Part A**
4	Photogrammetry Processing of Imageries, Preparation of Drawings, GIS data base and submission of Draft Deliverables Base Map compilation GIS compatible Base Map on 1:2000 scale with 1m contours along with survey report.	T + 60 days	15% **of Part A**
5	Geo referencing Cadastral map, Digitisation and preliminary Survey No. wise Area Statement	T+ 75 Days	10% **of Part A**
6	Final Alignment of Economic Corridor	T+ 90 Days	10% **of Part A**
7	Draft submission of report	T+ 100 Days	15% **of Part A**
8	Final submission of report	T + 120 Days	25% **of Part A**
9	Supply of GIS Engineer	6 months	Monthly Basis of Part B of Quote

GST will be payable extra as applicable

6.Liaison Meetings

Liaison meetings shall be held between the BMRDA and the Contractor at frequent intervals. The meetings would be attended by members of the supervision staff as necessary and would have the objective of expanding on the contents of the progress reports, discussing any problems and financial matters.

SECTION VI: CONTRACT FOR CONSULTANT'S SERVICES

between

[Name of Client]

and

[Name of Consultants]

Dated :

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I. FORM OF CONTRACT

This CONTRACT (hereinafter called the "Contract") is made the _____ day of the month of _____, 200___ , between, on the one hand, _____ (hereinafter called the "Client") and, on the other hand, _____(hereinafter called the "Consultants").

*[*Note: If the Consultants consist of more than one entity, the above should be partially amended to read as follows*:

".....(hereinafter called the "Client") and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultants' obligations under this Contract, namely, _____ and _____ (hereinafter called the "Consultants.")"]

WHEREAS

(a) the Client has requested the Consultants to provide certain consulting services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the "Services");

(b) the Consultants, having represented to the Client that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:

   (a) The General Conditions of Contract (hereinafter called "GC");

   (b) The Special Conditions of contract (hereinafter called "SC");

   (c) The following Appendices:

Appendix A:	Description of the Services	
Appendix B:	Reporting Requirements	_____
Appendix C:	Key Personnel and Sub-consultants	----------
Appendix D:	Services and Facilities to be provided by the Client	_____
Appendix E:	Breakdown of Contract Price	_____
Appendix F:	Form of Guarantee for Advance Payments	_____

[*Note: If any of these Appendices are not used, the words* "Not Used" *should be inserted below next to the title of the Appendix on the sheet attached hereto carrying the title of that Appendix.*]

2. The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Contract, in particular:

(a) The Consultants shall carry out the Services in accordance with the provisions of the Contract; and

(b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

FOR AND ON BEHALF OF
[NAME OF CLIENT]

By
(Authorized Representative)

FOR AND ON BEHALF OF
[NAME OF CONSULTANT]

By
(Authorized Representative)

[***Note**: If the Consultants consist of more than one entity, all of these entities should appear as signatories, e.g., in the following manner*:]

FOR AND ON BEHALF OF EACH OF
THE MEMBERS OF THE CONSULTANTS

[Name of Member]

By
(Authorized Representative)

[Name of Member]

By
(Authorized Representative)

etc.

II. GENERAL CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

(a) "Applicable Law" means the laws and any other instruments having the force of law in India, as they may be issued and in force from time to time;

(b) "Contract" means the Contract signed by the Parties, to which these General Conditions of Contract (GC) are attached, together with all the documents listed in Clause 1 of such signed Contract;

(c) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1

(d) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;

(e) "GC" means these General Conditions of Contract;

(f) "Government" means the Government of Karnataka;

(g) "Local currency" means Indian Rupee;

(h) "Member", in case the Consultants consist of a joint venture of more than one entity, means any of these entities, and "Members" means all of these entities; 'Member in Charge' means the entity specified in the SC to act on their behalf in exercising all the Consultants' rights and obligations towards the Client under this Contract.

(i) "Party" means the Client or the Consultants, as the case may be, and Parties means both of them;

(j) "Personnel" means persons hired by the Consultants or by any Sub-consultant as employees and assigned to the performance of the Services or any part thereof; and 'key personnel' means the personnel referred to in Clause GC4.2 (a)

(k) "SC" means the Special Conditions of Contract by which these General Conditions of Contract may be amended or supplemented;

(l) "Services" means the work to be performed by the Consultants pursuant to this Contract as described in Appendix A; and

(m) "Sub-consultant" means any entity to which the Consultants subcontract any part of the Services in accordance with the provisions of Clauses 3.5 and 4.

(n) 'Third party" means any person or entity other than the Government, the Client, the Consultants, or a Sub-Consultant.

1.2 Law Governing the Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

1.3 **Language**

This Contract has been executed in English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.4 **Notices**

Any notice, request or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram or facsimile to such Party at the address specified in the SC.

1.5 **Location**

The Services shall be performed at such locations as are specified in Appendix A and, where the location of a particular task is not so specified, at such locations, whether in Karnataka or elsewhere, as the Client may approve.

1.6 **Authorized Representatives**

Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Client or the Consultants may be taken or executed by the officials specified in the SC.

1.7 **Taxes and Duties**

The Consultants, Sub-consultants and their Personnel shall pay such taxes, duties, fees and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

2. **Commencement, Completion, Modification and termination of Contract**

2.1 **Effectiveness of Contract**

This Contract shall come into effect on the date the Contract is signed by both Parties or such other later date as may be stated in the SC.

2.2 **Commencement of Services**

The Consultants shall begin carrying out the Services within thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the SC.

2.3 **Expiration of Contract**

Unless terminated earlier pursuant to Clause 2.7, this Contract shall terminate at the end of such time period after the Effective Date as is specified in the SC.

2.4 **Modification**

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties.

2.5 **Force Majeure**

2.5.1 **Definition**

For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

2.5.2 **No Breach of Contract**

The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

2.5.3 **Extension of Time**

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

2.5.4 **Payments**

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

2.6 **Suspension:**

The Client may by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their obligations under this contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

2.7 Termination

2.7.1 **By the Client**

The Client may terminate this Contract, by not less than thirty (30) days' written notice of termination to the Consultants, to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause 2.7.1 and sixty (60) days' in the case of the event referred to in (e):

(a) if the Consultants do not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days of receipt after being notified or within such further period as the Client may have subsequently approved in writing;

(b) if the Consultants (or any of their Members) become insolvent or bankrupt;

(c) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or

(d) if the consultant, in the judgment of the Client has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

"corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the selection process or in contract execution.

"fraudulent practice" means a misrepresentation of facts in order to influence a selection process or the execution of a contract to the detriment of GOK, and includes collusive practice among consultants (prior to or after submission of proposals) designed to establish prices at artificial non-competitive levels and to deprive GOK of the benefits of free and open competition.

(e) if the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.

2.7.2 **By the Consultants**

The Consultants may terminate this Contract, by not less than thirty (30) days' written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (c) of this Clause 2.7.2:

(a) if the Client fails to pay any monies due to the Consultants pursuant to this Contract and not subject to dispute pursuant to Clause 7 hereof within forty-five (45) days after receiving written notice from the Consultants that such payment is overdue;

(b) If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same with in forty-five (45) days (or such longer period as the Consultants may have subsequently approved in writing) following the receipt by the Client of the Consultants' notice specifying such breach;

(c) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days.

2.7.3 **Cessation of Rights and Obligations**

Upon termination of this Contract pursuant to Clause GC 2.7 , or upon expiration of this Contract pursuant to Clause GC 2.3, all rights and obligations of the Parties hereunder shall cease, except :

(i) such rights and obligations as may have accrued on the date of termination or expiration;

(ii) the obligation of confidentiality set forth in Clause GC 3.3 hereof;

(iii) any right which a Party may have under the Applicable Law.

2.7.4 **Cessation of Services**

Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GC 2.7.1 or GC 2.7.2 hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultants and equipment and materials furnished by the Client, the Consultants shall proceed as provided, respectively, by Clauses GC 3.7 and GC 3.8 .

2.7.5 **Payment upon Termination**

Upon termination of this Contract pursuant to Clauses 2.7.1 or 2.7.2, the Client shall make the following payments to the Consultants:

(a) remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;

(b) except in the case of termination pursuant to paragraphs (a) and (b) of Clause 2.7.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract.

3. **Obligations of the Consultants:**

3.1 **General**

The Consultants shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-consultants or third parties.

3.2 **Conflict of Interests**

3.2.1 **Consultants Not to Benefit from Commissions, Discounts, etc.**

The remuneration of the Consultants pursuant to Clause 6 shall constitute the Consultants' sole remuneration in connection with this Contract or the Services, and the Consultants shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultants shall use their best efforts to ensure that the Personnel, any Sub-consultants, and agents of either of them, similarly shall not receive any such additional remuneration.

3.2.2 **Procurement Rules of Funding Agencies**

If the Consultants, as part of the Services, have the responsibility of advising the Client on the procurement of goods, works or services, the Consultants shall comply with any applicable procurement guidelines of the funding agencies and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions obtained by the Consultants in the exercise of such procurement responsibility shall be for the account of the Client.

3.2.3 **Consultants and Affiliates Not to engage in certain Activities**

The Consultants agree that, during the term of this Contract and after its termination, the Consultants and their affiliates, as well as any Sub-consultant and any of its affiliates, shall be disqualified from providing goods, works or services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.

3.2.4 **Prohibition of Conflicting Activities**

Neither the Consultants nor their Sub-consultants nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

(a) during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract; or

(b) after the termination of this Contract, such other activities as may be specified in the SC.

3.3 **Confidentiality**

The Consultants, their Sub-consultants, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Client's business or operations without the prior written consent of the Client.

3.4 **Insurance to Be Taken out by the Consultants**

The Consultants (a) shall take out and maintain, and shall cause any Sub-consultants to take out and maintain, at their (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as shall be specified in the SC; and (b) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums have been paid.

3.5 **Consultants' Actions Requiring Client's Prior Approval**

The Consultants shall obtain the Client's prior approval in writing before taking any of the following actions:

(a) entering into a subcontract for the performance of any part of the Services, it being understood (i) that the selection of the Sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by the Client prior to the execution of the subcontract, and (ii) that the Consultants shall remain fully liable for the performance of the Services by the Sub-consultant and its Personnel pursuant to this Contract;

(b) appointing such members of the Personnel not listed by name in Appendix C ("Key Personnel and Sub-consultants"), and

(c) any other action that may be specified in the SC.

3.6 **Reporting Obligation**

The Consultants shall submit to the Client the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.

3.7 **Documents Prepared by the Consultants to Be the Property of the Client**

All plans, drawings, specifications, designs, reports and other documents and software submitted by the Consultants in accordance with Clause 3.6 shall become and remain the property of the Client, and the Consultants shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Client, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SC.

3.8 **Equipment and Materials Furnished by the Client**

Equipment and materials made available to the Consultants by the Client or purchased by the Consultants with funds provided by the Client shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultants shall make available to the Client an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Client's instructions. While in possession of such equipment and materials, the Consultants, unless otherwise instructed by by the Client in writing, shall insure them at the expense of the Client in an amount equal to their replacement value.

4. **Consultants' Personnel and Sub-Consultants**

4.1 **Description of Personnel**

The titles, agreed job descriptions, minimum qualifications and estimated periods of engagement in the carrying out of the Services of the Consultants' Key Personnel are described in Appendix C. The Key Personnel and Sub-consultants listed by title as well as by name in Appendix C are hereby approved by the Client.

4.2 **Removal and/or Replacement of Personnel**

(a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the Key Personnel, the Consultants shall forthwith provide as a replacement a person of equivalent or better qualifications.

(b) If the Client finds that any of the Personnel have (i) committed serious misconduct or has been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultants shall, at the Client's written request specifying the grounds therefor, forthwith provide as a replacement a person with qualifications and experience acceptable to the Client.

(c) The Consultants shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

5. **Obligations of the Client**

5.1 **Assistance and Exemptions**

Unless otherwise specified in the SC, the Client shall use its best efforts to ensure that the Government shall:

(a) issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services;

(b) assist the Consultants and the Personnel and any Sub-consultants employed by the Consultants for the Services from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Law;

(c) provide to the Consultants, Sub-consultants and Personnel any such other assistance as may be specified in the SC.

5.2 **Services and Facilities**

The Client shall make available to the Consultants and the Personnel, for the purposes of the services and free of any charge, the services, facilities and property described in Appendix D at the times and in the manner specified in said Appendix D, provided that if such services, facilities and property shall not be made available to the Consultants as and when so specified, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Consultants for the performance of the Services, (ii) the manner in which the Consultants shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Consultants as a result thereof.

6. **Payment to the Consultants:**

6.1 **Lump Sum Remuneration**

The Consultant's total remuneration shall not exceed the Contract Price and shall be a fixed lump sum including all staff costs, Sub-consultants' costs, printing, communications, travel, accommodation, and the like, and all other costs incurred by the Consultant in carrying out the Services described in Appendix A. Except as provided in Clause 5.2, the Contract Price may only be increased above the amounts stated in clause 6.2 if the Parties have agreed to additional payments in accordance with Clause 2.4.

6.2 **Contract Price**

The Contract price is set forth in the SC.

6.3 **Payment for Additional Services**

For the purpose of determining the remuneration due for additional services as may be agreed under Clause 2.4, a breakdown of the lump sum price is provided in Appendices D and E.

6.4 **Terms and Conditions of Payment**

Payments will be made to the account of the Consultants and according to the payment schedule stated in the SC. Unless otherwise stated in the SC, the first payment shall be made against the provision by the Consultants of a bank guarantee for the same amount, and shall be valid for the period stated in the SC. Any other payment shall be made after the conditions listed in the SC for such payment have been met, and the Consultants have submitted an invoice to the Client specifying the amount due.

6.5 **Interest on Delayed Payments**

If the Client has delayed payments beyond fifteen (15) days after the due date stated in the SC, interest shall be paid to the Consultants for each day of delay at the rate stated in the SC.

7. Settlement of Disputes

7.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

7.2 Dispute Settlement

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

III. SPECIAL CONDITIONS OF CONTRACT

Number of GC Clause *	Amendments of, and Supplements to, Clauses in the General Conditions of Contract

[1.1 (h) The Member in Charge is _____].

[1.4.1 The addresses are:

Client :_____
_____
_____

Attention :_____
Telex :_____
Facsimile :_____
E-mail :----------

Consultants :_____
_____
_____

Attention :_____
Telex :_____
Facsimile :_____
E-mail :----------

[Note[1]: Fill in the blanks]

1.4.2 Notice shall be deemed to be effective as follows:

(a) in the case of personal delivery or registered mail, on delivery;

(b) in the case of telexes/e-mail, 24 hours following confirmed transmission;

(c) in the case of telegrams, 24 hours following confirmed transmission; and

(d) in the case of facsimiles, 24 hours following confirmed transmission.]

1.6 The Authorized Representatives are:

For the Client : _____

For the Consultant : _____

[Note: Fill in the blanks]

1.7.1 The consultants and the personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the client shall perform such duties in regard to the deduction of such tax as may be lawfully imposed.

1.7.2 However the Consultancy Services tax payable for this Consultancy Services shall be paid/ reimbursed by the Client separately.]

[1] *All Notes should be deleted in the Final Text*

[2.1 The date on which this Contract shall come into effect is :

[2.2 The time period shall be ….. days *[Note: Fill in 30 days or any other appropriate]*or such other time period as the parties may agree in writing]

[2.3 The period shall be _____ *[Note* : *Fill in the period, e.g., twenty-four (24) months* or such other period as the parties may agree in writing].

[3.4 The risks and the coverages shall be:

(1) Third Party motor vehicle liability insurance as required under Motor Vehicles Act, 1988, in respect of motor vehicles operated in India by the Consultants or their Personnel or any Sub-consultants or their Personnel, for the period of Consultancy;

(2) Third Party liability insurance, with a minimum coverage for Rs. ..... for the period of Consultancy;

(3) Client's liability and workers' compensation insurance in respect of the Personnel of the Consultants and of any Sub-consultant, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate;

(4) Professional liability insurance, with a minimum coverage equal to total contract value for this consultancy; and

(5) Insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultants' property used in the performance of the Services, and (iii) any documents prepared by the Consultants in the performance of the Services.

[*Note: Fill in the blanks and delete what is not applicable*]

3.5 (c) ***Note****: Delete where not applicable.*]

The other actions are _____.]

3.7 The Consultants shall not use these documents for purposes unrelated to this Contract without the prior written approval of the Client.]

5.1 *Note: List here any changes or additions to Clause GC5.1 If there are no such changes or additions, delete this Clause SC5.1 from the SC.]*

6.2 The amount of Contract is Rs. _____ .

6.4 The account is :…….]

Payment Schedule

Payments shall be made according to the following schedule :

Sl. No.	Deliverables	Time Frame	Amount Payable
1	Inception Report **covering Approach & Methodology, Bar Chart, Quality Control** and DGPS control network	**T + 15 Days**	**10%**
2	Data Collection and establishment of DGPS Control Network using high end DGPS equipment	T + 30 Days	15%
3	Preliminary Alignment for Economic Corridor based on Desktop Study on SOI Topo Sheet, HRSI CartoSAT images	T + 45 days	10 %
4	Photogrammetry Processing of Imageries, Preparation of Drawings, GIS data base and submission of Draft Deliverables Base Map compilation GIS compatible Base Map on 1:2000 scale with 1m contours along with survey report.	T + 60 days	35%
5	Geo referencing Cadastral map, Digitisation and preliminary Survey No. wise Area Statement	T+ 75 Days	10%
6	Final Alignment of Economic Corridor	T+ 90 Days	10%
7	Draft submission of report	T+ 100 Days	5%
8	Final submission of report	T + 120 Days	5%
9	Supply of GIS Expert	6 months	Monthly Basis of Part B of Quote

.

6.5 Payment shall be made within 45 days of receipt of the invoice and the relevant documents specified in Clause 6.4, and within 60 days in the case of the final payment.

7.2 Disputes shall be settled by arbitration in accordance with the following provisions.

7.2.1 Selection of Arbitrators:

Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:

(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to the President, Institution of Engineers India*, New Delhi, for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the President, Institution of Engineers India*, New Delhi, shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.

(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultants shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by Secretary, the Indian Council of Arbitration, New Delhi.

[1] Modify appropriately.

* Insert President Indian Roads Congress (for roads and bridge works) or any other appropriate Institution (for other type of consultancies)

(c) If, in a dispute subject to Clause SC 7.2.1 (b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the Secretary, Indian Council of Arbitration, New Delhi, to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.

7.2.2 Rules of Procedure

Arbitration proceedings shall be conducted in accordance with procedure of the Arbitration & Conciliation Act 1996, of India

7.2.3 Substitute Arbitrators

If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.

7.2.4 Qualifications of Arbitrators

The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a) through (c) of Clause 7.2.1 hereof shall be a nationally recognized legal or technical expert with extensive experience in relation to the matter in dispute.

7.2.5 Miscellaneous

In any arbitration proceeding hereunder:

(a) proceedings shall, unless otherwise agreed by the Parties, be held in Bangalore.

(b) the English language shall be the official language for all purposes

(c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.

IV. APPENDICES
– Deleted

Appendix F: Form of Bank Guarantee for Advance Payments

(Reference SC Clause 6.4 of Contract)

(To be stamped in accordance with Applicable Stamp Act, if any)

Ref: _____ Bank Guarantee: _____ Date: _____

Dear Sir,

In consideration of M/s. _____ (hereinafter referred as the "Client", which expression shall, unless repugnant to the context or meaning thereof include it successors, administrators and assigns) having awarded to M/s. _____(hereinafter referred to as the "Consultant" which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a contract by issue of client's Contract Agreement No. _____ dated _____ and the same having been unequivocally accepted by the Consultant, resulting in a Contract valued at _____ for _____ Contract (hereinafter called the "Contract")
(scope of work)
and the Client having agreed to make an advance payment to the Consultant for performance of the above Contract amounting to _____ (in words and figures) as an advance against Bank Guarantee to be furnished by the Consultant.

We _____ (Name of the Bank) having its Head Office at _____ (hereinafter referred to as the Bank), which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators executors and assigns) do hereby guarantee and undertake to pay the client immediately on demand any or, all monies payable by the Consultant to the extent of _____ as aforesaid at any time upto _____ @ _____ without any demur, reservation, contest, recourse or protest and/or without any reference to the consultant. Any such demand made by the client on the Bank shall be conclusive and binding notwithstanding any difference between the Client and the Consultant or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. we agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Client discharges this guarantee.

The Client shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary the advance or to extend the time for performance of the contract by the Consultant. The Client shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Client and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Client and the Consultant any other course or remedy or security available to the Client. The bank shall not be relieved of its obligations under these presents by any exercise by the Client of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Client or any other indulgence shown by the Client or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Client at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Client may have in relation to the Consultant's liabilities.

Notwithstanding anything contained herein above our liability under this guarantee is limited to_____and it shall remain in force upto and including _____ and shall be extended from time to time for such period (not exceeding one year), as may be desired by M/s. _____ on whose behalf this guarantee has been given.

Dated this _____ day of _____ 19_____ at __

WITNESS

_____ _____

(signature) (signature)

_____ _____

(Name) (Name)

_____ _____

(Official Address) Designation (with Bank stamp)`

Attorney as per Power of
Attorney No._____Dated _

Note : The bank guarantee shall be issued either by a bank (Nationalized/Scheduled) located in India